

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Choi et al.	Art Unit	: 1732
Serial No.	: 09/934,248	Examiner	: Mathieu D. Vargot
Filed	: August 21, 2001	Conf. No.	: 6502
Title	: FLEXURE BASED MACRO MOTION TRANSLATION STAGE		

**Mail Stop Appeal Brief - Patents**

Commissioner for Patents  
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REPLY BRIEF

This is in response to the Examiner's Answer, dated December 2, 2008.

With respect to the § 112 rejection, the Examiner does not specifically address Applicants' rebuttal, but merely disagrees and maintains his rejection. This is in violation of MPEP § 2142, which requires the Examiner to reconsider the patentability of the claimed invention in view of Applicants' rebuttal. In effect, the Examiner has given Applicants' rebuttal argument no weight, which is not to be done except in rare situations. MPEP § 2145. Claim 3 recites that the elongated members are each subjected to a pre-load. The Examiner asserts that "[t]he aspect of subjecting the elongated members to a pre-load constitutes a manipulative step that would limit a process claim but not an apparatus claim." Applicants traverse. All words in a claim must be considered by the Examiner. MPEP § 2143.03. Thus, it is not permitted for the Examiner to refuse to consider the "pre-load" limitation in his determination of whether the cited art renders Claim 3 obvious. And, the Examiner must read the claims as a whole and not parse out words in this manner. MPEP § 2141.02. Applicants have shown where in the Specification this term is disclosed. The Examiner admits that is "indeed...disclosed in the specification," but ignores this. That is improper under the MPEP. The Examiner must interpret the limitations in a manner that is consistent with the Specification. MPEP §§ 2111 & 2141. Paragraph [0147] and Fig. 19 clearly disclose to one skilled in the art that slipping between discs 1902 can be prevented by a pre-load previously applied between them. This is not a step that is performed during operation of the device in Fig. 19; it is a physical constraint that is applied when the device is constructed (by mounting the discs 1902 onto the bar (not labeled in Fig. 19, but shown also in Figs. 16 and 17). As a result, this pre-load is a structural constraint on the discs 1902 so that they are mounted tightly against each other to prevent their adjoining surfaces from slipping when they roll against each other as link 1906 rotates away from link 1908, as shown by the X arrow motion. Without that pre-load which has been determined and physically set, as link 1906

rotates, slipping may occur between discs 1902 resulting in an undesired combination of movements of the other links, such as link 1908. Such a pre-load is not applied in a dynamic manner while 1906 rotates, but instead has been physically set beforehand. The claims are directed to an apparatus that can be distinguished from the prior art in terms of structure rather than function. MPEP § 2114. One skilled in the art can distinguish between a device without such a pre-load by an inspection of the device in a stationary, inactive state by observing if the two discs 1902 are tightly positioned together. For example, if a device has the two discs mounted in a manner where they are not touching, then it could be determined that a pre-load is not present. Since a process step naturally implies that an action is occurring over a period of time, under the Examiner's assertion, infringement of the claim could only be determined by inspecting the device undergoing some sort of dynamic change of states over time. That is not true with respect to the claimed invention. Likewise, the Examiner can determine if a reference reads on the claims by determining if the reference teaches elongated members mounted so that they touch each other in a tight manner.

As a result, the Examiner must remove the § 112 rejection and examine the claims for art rejections.

Though claims 38 and 219 recite different forms of the term "pre-load," the meaning remains the same as clearly supported in the Specification.

With respect to the §103 rejection of Claim 1, the Examiner is now asserting that in *Stewart* the three-axis joint reads on both the first joint and the flexure joint. This is an unreasonably broad interpretation of the claim language, which is inconsistent with description of such terms in the Specification and with how those skilled in the art would interpret these limitations. MPEP §§ 2111 & 2141. There is nothing in the Specification that even suggests the first joint is the same as the flexure joint. This interpretation by the Examiner of these claim terms is unreasonable since it is significantly broader than what would be understood by one of ordinary skill in the art, taking into account enlightenment by way of the written description contained in Applicants' Specification. *Id.* The Examiner asserts that Claim 1 "actually reads or suggests" his interpretation. Common sense and the language of Claim 1 does not support such a position. The Examiner further asserts that the claim language can be interpreted as merely linking together "the joints and elongated members... in some manner" (emphasis added). This is incorrect; the first joint is coupled to the second joint through the elongated members and the

flexure joint, and the elongated members are coupled to the flexure joint in a configuration so that the members move at substantially the same rate and in opposite directions so that the holding member moves along first and second transverse axes. These are physical limitations upon the configurations of the joints and elongated members, which are not merely some manner. The Examiner has not shown how the linkages of *Hogan* combined with the linkages and joints of *Stewart* meet these structural limitations. Rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. MPEP § 2141. The Examiner's reasoning for combining the references is merely "for added flexibility in moving the platform," and that the "[t]he replacement of the hydraulic linkages of *Stewart* with the linkages of *Hogan* would facilitate movement of the platform and hence their substitution would have been obvious," and "[t]he substitution itself would provide for the elongated members to move in the manner stipulated and noted as lacking in *Stewart*." These are mere conclusory statements and do not amount to articulated reasonings with rational underpinnings as to how the two teachings are combined to arrive at the claimed invention. As such, the Examiner continues to fail at proving a *prima facie* case of obviousness.

With respect to the § 103 rejection of Claim 3, the Examiner merely asserts that it "has been discussed," wherein he is apparently referring to his reply to Applicants' § 112 rebuttal. No, it has not. The § 112 rejection of Claim 3 does not substitute for a showing by the Examiner of how the references teach or suggest Claim 3. The Examiner further asserts that "when the structure of *Stewart* is set up, it would obviously be subjected to a pre-load of some kind or otherwise the structure could fail during use." This is a conclusory statement without any facts in support. The Examiner must provide objective support in *Stewart* and *Hogan*; he has not. Further, the Examiner has not provided any logical argument or rational underpinnings why a pre-load would be applied to each of the elongated members in *Stewart* and *Hogan* to prevent a failure during use. Applicants traverse the assertion that it would be conventional in the art to pre-load a structure to ensure that it does not fail upon later usage. Further, the Examiner is interpreting the term "pre-load" in an unreasonably broad manner inconsistent with the Specification. MPEP §§ 2111 & 2141.

With respect to Claims 5 and 6, the Examiner asserts that "[e]longated members connected to a flexure joint would still be able to rotate." This may be true in the abstract, but

not with respect to the cited art, and the Examiner has failed to show how the prior art teaches that elongated members connected to a flexure joint would still be able to rotate, including through a 40 degree range of motion. The Examiner further asserts that “the claims do not require that the flexure joint be in between the elongated members.” This clearly seems to be an admission by the Examiner that the cited art does not teach or suggest such a limitation. As a result, the Examiner has admitted that the prior art does not render obvious or anticipate any of the claims that recite such limitations, since the claims do require this limitation to be present as those limitations are interpreted consistent with the Specification. *Id.*

With respect to Claim 12, the Examiner ironically asserts that “it is submitted that appellant’s assertion that linear servo motor would not replace hydraulic jacks is in error and amounts to mere conjecture.” Applicants respectfully remind the Examiner that it is his burden to show how it would be conventional in the art for such servo motors to replace hydraulic jacks to arrive at the claimed invention. MPEP § 2142. The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_, \_\_\_, 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that “rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” A conclusory statement, such as “[m]agnetic servomotors ... are convention in the art,” provides absolutely no rational underpinning as to why a skilled artisan would look to such a servomotor to replace the hydraulic jacks to arrive at the claimed invention. The assertion “to facilitate control over the motion of the holding member/platform” is not a rational underpinning. It is merely the Examiner’s subjective statement. The same is true with respect to the Examiner’s statement that it would be obvious to replace a hydraulic jack with a linear servo motor since both can move in a straight line. Thus, it is the Examiner’s assertion that amounts to mere conjecture. And as such, the Examiner has yet again failed to prove a *prima facie* case of obviousness. Moreover, Applicants provided a rebuttal argument in the Appeal Brief, which the Examiner has completely ignored, in clear violation of MPEP §§ 707.07(f), 2142 and 2145.

With respect to Claims 13 and 14, the Examiner again violates MPEP §§ 2142 and 2145. Moreover, the Examiner is apparently espousing a new legal precedent by rebutting that “[t]here

is no obvious reason why the structures of the prior art would not have been used to support semiconductors or as wafer chucks, should they be scaled down appropriately." The Examiner is respectfully requested to refer to MPEP § 2141 for the requirements for establishing a *prima facie* case of obviousness. It clearly is illogical to believe that one skilled in the art at the time of the invention would have viewed the flight simulator in Stewart and thought it obvious to adapt it to holding a semiconductor wafer.

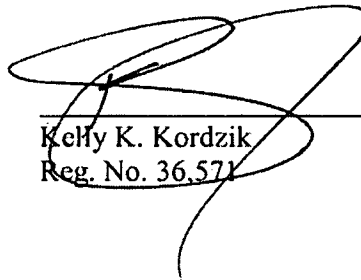
With respect to Claim 15, the Examiner has completely ignored Applicants' rebuttal. MPEP §§ 2142 and 2145.

With respect to Claims 31 and 212, the Examiner merely asserts that "it is believed that any additional language has been addressed." Where? "Believing" does not support a legal conclusion of obviousness. The Examiner has failed to prove a *prima facie* case of obviousness.

With respect to Claim 37, the Examiner makes the unsupported statement that "[i]t is rather clear that the structure of *Stewart* alone would allow motion along axes that are transverse to each other." This is a hollow statement; the Examiner is requested to show this is true with actual facts.

Respectfully submitted,

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